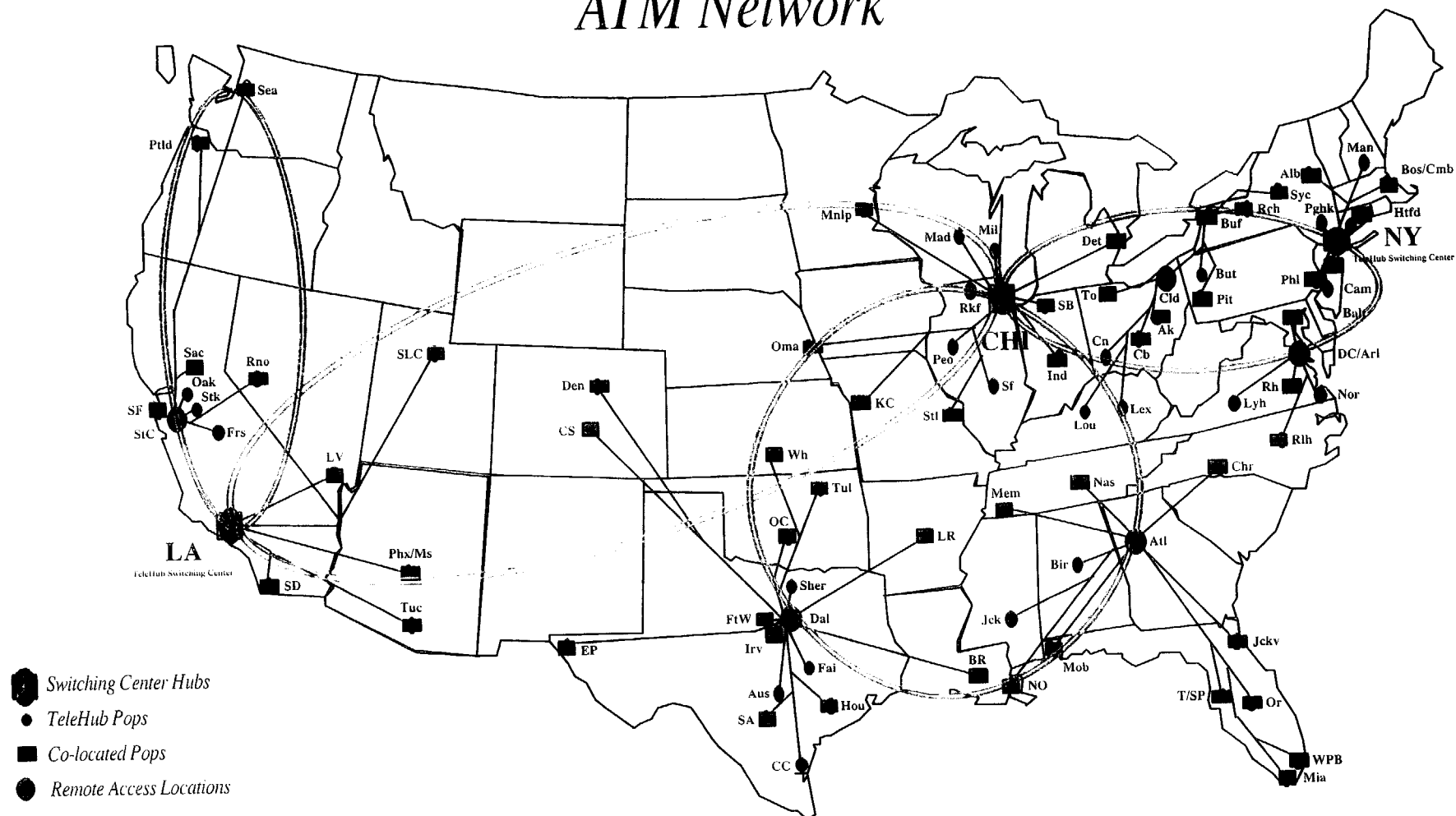


## ATM Network



*Break out of  
the reseller squeeze.*

Your customers are demanding lower priced telecommunications services every day. But your wholesale carrier is not making it easy. In fact, they may see you as more of a competitor than a customer. What you really need is a simpler, more flexible solution from a wholesale carrier dedicated to *your* needs. A carrier that can take the cost-efficiencies of a leading edge ATM backbone network and pass them on to you...with no strings attached. A partner like TeleHub.

TeleHub

Pass it on.



**Frame Relay**

# Intermedia Communications

## Frame Relay.

### In a world of technology, we give you the world.

#### Network your critical data with ease, and savings.

Today, your business is transmitting more data than ever, including graphics, images, and other high-speed data applications. Every bit of that information can be vital to your success and your competitive edge.

Keeping up has not been easy. Private digital connections, leased lines, dial-up modem links, and packet services such as X.25 often prove to be too expensive, too inefficient, too slow or just not well suited to LAN interconnections.

Fortunately, Intermedia Communications' Frame Relay technology is available to handle your LAN-to-LAN and SNA data communications in a superior way.

Frame relay is a wide area packet data network that allows for multi-protocol transport, diversity, and redundancy for your network. Unlike dedicated private telephone lines—which were designed for voice transmission—Intermedia Communications' Frame Relay service is engineered to transmit all your crucial data with several competitive advantages:

- It costs less and reduces your overall network expenditures.
- It is easy to manage and supports a multi-protocol, multi-vendor environment.
- It provides a superior level of performance for your network, increasing network availability, reliability, and response time.
- It consolidates your data and voice networks, including SNA and LAN applications into a single integrated network, saving time and administration costs.

Frame relay provides a total networking solution for the communications your company requires in today's global economy—and tomorrow's.

#### Increased capabilities, decreased cost.

Intermedia Communications Frame Relay offers LAN-to-LAN and SNA users greater network integrity and reliability. You can now carry critical data for your daily operations with increased throughput and, at the same time, capture cost savings. You can match the applications requirements of your network, buying only what you need, and saving as much as 40% off the cost of using leased private lines. With dedicated leased lines, your bandwidth is fixed at a specific throughput rate. For many users a 56 Kbps line is not enough, but a T1 line is too costly. Frame relay enables you to purchase the speeds you need, plus they cost less than regular 56 Kbps lines you may already be using.

Bottom line, Intermedia Communications puts your data to work for you faster, more efficiently, and more economically than ever before.

#### Our guarantee: end-to-end.

Only Intermedia Communications Frame Relay guarantees a delivery rate of 99.9% of Committed Information Rate (CIR) and an average monthly Frame Delivery Rate of 99% for frames marked "discard eligible" end-to-end; 99.5% network availability; Network Transit Delay (NTD) of 125 milliseconds or less; and Mean-Time-to-Repair of 4 hours or less—all end-to-end. Our guarantees cover your entire network including Local Exchange Carrier (LEC) access facilities, for retail networks with 12 or more installed sites.

Our industry-leading guarantees earned us *Data Communications* magazine's distinguished Hot Products Award for 1997—signifying continued dedication and accountability to our customers.

## **Frame Relay by Intermedia Communications – a superior technology, a superior choice.**

### **BENEFITS FOR TODAY'S BUSINESSES:**

- Cost savings: Buy only the services and the bandwidth you actually need
- Partnering with a recognized leader in frame relay
- Responsive to your rapidly changing environment; *focused on your requirements*
- End-to-end support and service, including local exchange service
- Expandable service platform which easily accommodates upgrades and migration to ATM classes of service
- Guaranteed performance with the assurance of credit, just in case, covering your entire network, including local loops
- ViewSPAN for your network-monitoring needs of utilization, frame discards and errors
- Flexibility: tailored networking designs and solutions
- Global connectivity for today's global businesses

### **SERVICE THE WAY YOU NEED IT:**

- 30-day "Try Before You Buy" service testing
- Greater selection of port speeds to match your requirements
- Wide range of PVC options for proper needs alignment
- Flexible CIR options
- 24 x 7 Network Operation Centers for support and proactive network monitoring
- One-hour network outage reports
- One-minute call receipt for outage reports

### **INDUSTRY-LEADING NETWORK FEATURES BACKED BY END-TO-END GUARANTEES:**

- Homogenous, market-leading Cascade switch platform
- Distributed switch network topology - bringing the self-healing benefits of frame relay close to you
- Cost efficiencies and increased reliability with frame relay in every LATA
- Self-healing network designed with diverse routing between switches
- Greater number of service points for easy access
- Reduced access costs due to shorter local loops
- Full management for every connection
- Unmatched end-to-end guarantees
- DS-3 ATM, cell-based backbone

### **A NETWORK FOR YOUR DIVERSE APPLICATIONS:**

- Carrying critical data for your daily operations
- Customer information and databases
- Financial management and reporting information
- Graphic files
- Imaging
- Online sales tools
- Inventory management and reporting
- E-mail
- Disaster recovery
- Internet access
- Point-of-sale
- Automated teller machines
- Voice
- Video



## High density, unparalleled reliability.

Intermedia Communications is able to provide you with unmatched guaranteed performance through the most highly distributed frame relay network in the United States - including first, second, and third tier cities. Additionally, we utilize Local Exchange Carriers' (LEC) frame relay services to extend the density of our end-to-end frame relay solution to the closest local digital office to your premises.

Intermedia Communications designed its frame relay offering with your requirements for simplicity, cost efficiencies, and flexibility in mind. Frame relay is a shared networking technology in which you gain the economies of Intermedia Communications' robust networking facilities, yet maintain the privacy of your own defined network which is secure and customized to your needs. With frame relay, you purchase access to our network and pay a fixed rate for transport over the network. The total access bandwidth you select is based on your total traffic required in and out of each location - not on the number of points connected.

The transport of media over frame relay is performed through permanent virtual circuits (PVCs) which establish a fixed path of communications between two points. Multiple PVCs can originate and terminate on one, single port. The application which is being shared between the two points is "insured" for a guaranteed performance over the shared network in the event of network congestion. This "insurance" is referred to and purchased as the Committed Information Rate (CIR) - it is specific to the PVC. CIR enables you to manage multiple protocols via multiple PVCs based on an appropriately designated CIR. Intermedia Communications has designed the rate elements which encompass our end-to-end solutions with the flexibility of 1Kbps CIR increments.

## Connection services which properly fit your needs.

Intermedia Communications offers a wide variety of connection services to its frame relay network enabling you to select the best method of access dependent on your remote locations. We coordinate each of your connections to ensure you achieve the highest throughput, network integrity, and reliability.

Connecting a few dozen sites? Your Intermedia Communications technical representative will help you sort it all out in the provisioning and coordination of every connection. From Intermedia Communications, you will have a single point of contact and a comprehensive, single monthly bill.

### DEDICATED SERVICES

Our dedicated services provide point-to-point access to the network from your remote locations to our local frame relay switch. Because no two needs are alike, Intermedia Communications gives you a wide choice of bandwidth options in increments of 56 Kbps, fractional T1, T1 and custom high-speed frame relay with the ability to transfer data at rates up to 18 Mbps. Local access facilities are provided by the LEC or Alternative LEC (ALEC), and, in some geographic locations, by our own fiber optic facilities.

### SECURE ISDN

ISDN connectivity offers an attractive alternative to employing a dedicated high bandwidth connection such as a T1. Intermedia Communications provides a secure ISDN BRI connection which delivers economical 56Kbps fixed rate access to the Intermedia Communications Frame Relay network. The ISDN connection includes two (2) B channels of 56 Kbps each and one (1) D channel at 16 Kbps. ISDN tail circuit pricing and availability may differ from LEC to LEC. Please note that while some carriers may charge a flat rate for ISDN lines, others are priced on a usage-sensitive basis. As a result, if you are managing a high traffic site, a dedicated connection may be more economical.

With the continued deployment of Intermedia Communications' own dial-tone switches, we anticipate offering our customers affordable, Intermedia Communications ISDN circuits, along with wide-scale asynchronous dial access.

### NNI/LEC FRAME RELAY CIRCUITS

Fast packet network-to-network (NNI) local loops can significantly reduce the cost of network access and provides improved performance to DDS-based connectivity. LEC frame relay local loops extend the self-healing benefits of frame relay to your local digital-serving wire center. In order to effectively extend the performance benefits to our customers, Intermedia Communications has been at the forefront in the establishment and deployment of NNI connections.

Today, Intermedia Communications and its NNI partners have coordinated network operations via NNIs in order to facilitate fast, transparent resolution in the event of network problems. As a result, Intermedia Communications has industry-leading capabilities to provide full network management visibility through NNIs supporting rapid fault isolation.



## SECURE ASYNCHRONOUS DIAL

If your business is in a remote site, you are a telecommuter, or if you simply do not require high-speed throughput, we offer secure asynchronous dial access through our 1-800 number Data Dial Service. This low cost alternative provides access to Intermedia Communications' Frame Relay network via 9.6 Kbps, 14.4 Kbps, and 28.8 Kbps.

## Service Components - Ports and PVCs.

### ACCESS PORTS:

Intermedia Communications supports a wide range of access speeds designed to customize your network to its appropriate requirements. Access speeds range from 56Kbps to 1.536Mbps, at 64Kbps increments. The size of the port determines the maximum burst of all PVCs originating on that port through Intermedia Communications' network. Customers have the option of oversubscribing their ports, although Intermedia Communications recommends an oversubscription rate of no more than 200%.

Intermedia Communications provides four types of frame relay access ports: Standard, Managed, International, and LATA-Connect.

- **Standard Port** - Standard access port on Intermedia Communications' network supports both dedicated and frame relay local loops. The standard port rate applies to all domestic frame relay services.
- **Managed Port** - A Managed port with leased DSU and DSU management service, provides improved fault isolation of equipment problems.
- **International Port** - An International port is for all ports purchased outside the domestic United States serving area (Hawaii and Alaska are priced as Standard ports). Ports that reside within the U.S. that have PVCs terminating in international countries are still categorized as Inter-LATA ports.
- **LATA-Connect Port** - The LATA-Connect port defines the burst rate of the LATA-Connect service across the NNI. Ports may be provisioned up to 1.024 Kbps over a public NNI with the LEC.

### PERMANENT VIRTUAL CIRCUITS (PVCs):

PVCs are logical circuits which define a dedicated circuit between two points. Multiple PVCs can originate and terminate on a single port, allowing for the separation of applications across the network. PVCs can burst up to the smallest port size of its two logical end points. Intermedia Communications provides flexibility in PVC transport rates based upon the relative distance requirements of the customer. PVC rates are based on the following classifications:

- **LATA-Connect PVC** - The LATA-Connect PVC is used for providing connectivity between two LEC frame relay networks in separate LATAs. The LATA-Connect PVC is designed to afford customers the low cost of Inter-LATA transport connecting disparate LEC frame relay networks. LATA-Connect PVCs are applicable on LEC ports only (you have a purchased port in the LATA already). As such, both ends of the PVC must terminate on LEC ports.
- **Standard PVC** - The Standard PVC provides a single flat rate charge for all low speed PVCs anywhere in the nation. Standard PVCs are for basic frame relay transport and valid on Standard Ports only.
- **International PVC** - The International PVC provides a single flat rate charge for PVCs depending on their region of termination. Intermedia Communications is able to provide PVCs to many international markets, including Canada, Mexico, Eastern Europe, Western Europe, the Pacific Rim, South Africa, and South America. Each country or region has its own fixed PVC rate.
- **Internet PVC** - An Internet PVC can be purchased to access one of Intermedia Communications' multiple Internet gateways at an affordable rate.

Intermedia Communications establishes minimum and maximum CIR requirements per PVC in order to provide improved network utilization, management, and performance.

- **Minimum CIR Per PVC** - A minimum of 8Kbps CIR per simplex DS0 is provided with each PVC purchased from Intermedia Communications. Therefore, a PVC with 64Kbps of burst capability would be provided with a total CIR of 8Kbps, while a T1 would be provided with a minimum of 192Kbps CIR. Additional CIR can be purchased as required.
- **Maximum CIR Per PVC** - A maximum of 1,280Kbps CIR per PVC can be purchased on port rates of T1 and higher. Therefore, a PVC with T1 burst could have a maximum CIR of 1,280 Kbps CIR. On a T1 port, approximately 15% of the capacity is utilized for management and overhead, thus limiting CIR to 1,280Kbps - keeping the customer from over-insuring its circuits.



- Committed Information Rate (CIR) - The Committed Information Rate (CIR) is your applications insurance, as you can set the amount of guaranteed minimum throughput your applications require. Your total traffic can still burst up to the size of the access port you purchased. In the event of network congestion, only your insured throughput is guaranteed to meet your minimum throughput requirements. Intermedia Communications allows you to select your applications insurance in one-kilobyte increments; not forcing you to over-insure with high incremental CIR requirements. This provides flexibility in designing the network to individual application requirements.

## Frame Relay Service Options:

### TRANSPORT SERVICE OPTIONS

- DS0, Fractional T1 & T1 Speeds
- Standard Port
- Managed Port
- International PVCs
- High-Speed Frame Relay up to 10 mpps

### ACCESS SERVICE OPTIONS

- DS0, FT1 & T1 Private Line Access
- Frame Relay (LEC NNI) Access Services
- Intermedia Communications Fiber Access Services
- Secure ISDN Access Services
- Secure Async Dial Access Services
- Integrated Telecommunications Service Offerings

### MANAGEMENT SERVICE OPTIONS

- ViewSPAN Service
- CPE Management + Configuration Services
- Remote CPE Monitoring Services
- Managed SNA/Polled Protocol Services
- Managed LAN Interconnect Services

### APPLICATION SERVICE OPTIONS

- IP Networking Services
- SNA/SDLC Networking Services
- Disaster Recovery PVC
- Internet Access PVC
- Virtual Private Networks
- Internet Virtual Private Networks
- LAN-to-LAN Services
- Native LAN Services

### PROFESSIONAL SERVICE OPTIONS

- Network Consulting Services
- Network/Systems Integration Services
- Approved Customer Premise Equipment (CPE)
- CPE Configuration/Installation Services
- CPE Maintenance Services
- CPE Leasing Services

## Proactive Congestion Management.

### BACKBONE CONGESTION MANAGEMENT

Intermedia Communications constantly monitors and manages traffic on its public shared network backbone on a 24-hours-a-day, 365-days-a-year basis to prevent against potential packet loss and applications latency.

We have designed our network much like a highway system to support peak traffic flow on heavily utilized routes. If total aggregate utilization peaks to 85% of circuit route capacity, we provision additional bandwidth for that circuit route. This proactive process assures limited packet loss in the event activity spikes on heavily utilized routes.

We constantly evaluate long-term network capacity and expand bandwidth capabilities as needed. Average utilization is measured at five-minute intervals to calculate trends in traffic patterns. If a circuit route exceeds 50% of its capacity on an average business day, we allocate additional bandwidth for that route.

Our congestion management systems enable Intermedia Communications to provide unparalleled reliability with an industry-leading End-to-End Frame Delivery Guarantee of 99% of all frames and 99.9% of CIR on a monthly average basis.\*

\* Terms & conditions available in network guarantee descriptions.

ViewSPAN - Intermedia Communications' customer network monitoring tool enables you to obtain performance information on your frame relay network. ViewSPAN offers three levels of service:

ViewSPAN Level 1 - Report Generator

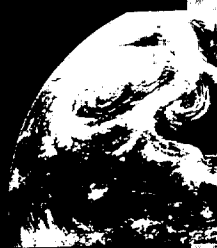
ViewSPAN Level 2 - Report Generator + Graphical User Interface

ViewSPAN Level 3 - Report Generator, Graphical User Interface, and SNMP trap forwarding

Now you can participate in the management of your network and have the performance data to determine network utilization, traffic patterns, frame delivery, and error rates.









INTERMEDIA COMMUNICATIONS

3625 QUEEN PALM DRIVE

TAMPA, FL 33619

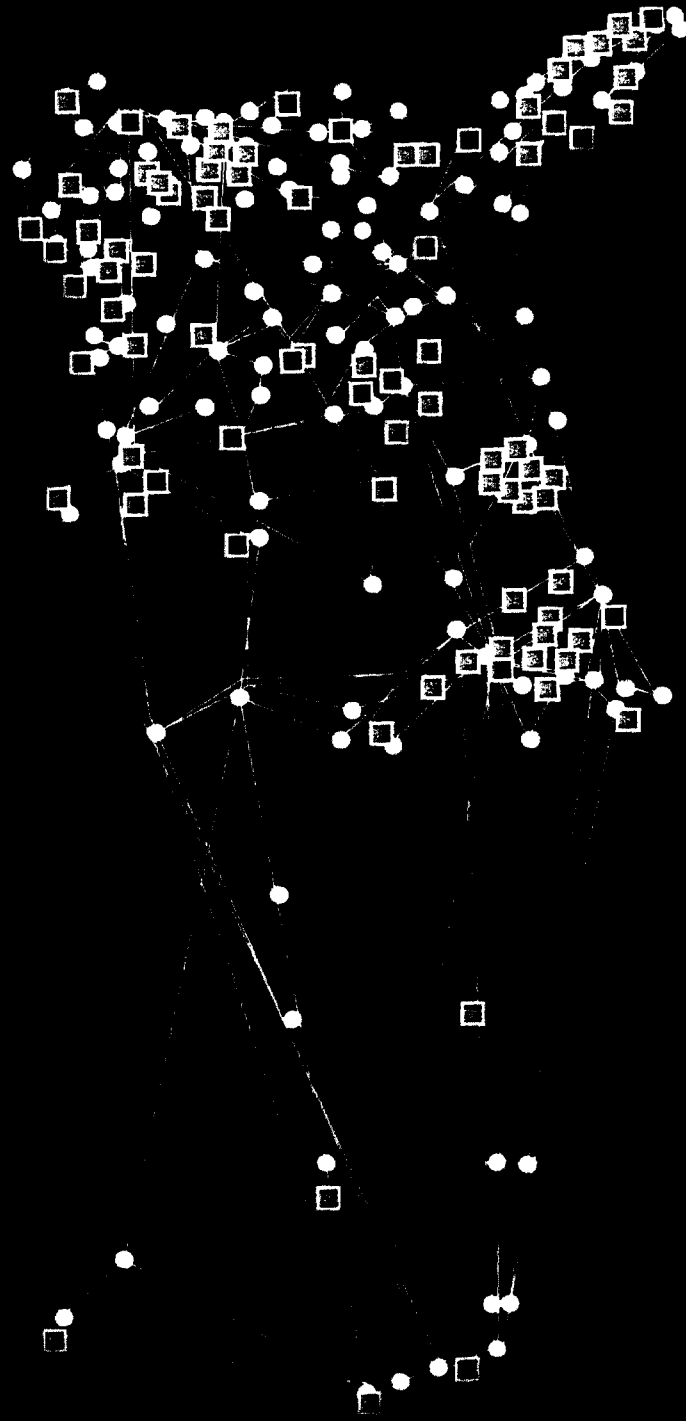
1 800 940 0011 or 1 800 250 2222

<http://www.icix.net>

[info@icix.net](mailto:info@icix.net)



# THE INTERMEDIARY NETWORK '98



- SALES OFFICES AND DMS LOCATIONS
- SALES OFFICES
- FRAME RELAY/ATM SWITCHES

INTERMEDIA  
WWW.INTERMEDIA.COM

# Collocation Services

Facilities collocation is offered to Intermedia Communications customers who have high usage requirements on Intermedia's networks and the need for sub-leasing of physical space in which to house telecommunications equipment for use in their business network operations.

- Secured Facilities Access
- Controlled Climate
- 30" x 30" x 84" Individual Locking Cabinets (1 Rack) or 23" Open Racks
- Dedicated 48V DC Power Feed A+B Feed w/20 Amp Current
- Voltage Window - 56 to 42 Volts
- Customer Provided UPS for AC Power Back-Up
- AC Power Available at Many Sites or Through Customer Provided Rectifier
- DC Power Back-Up
- Standard Power Cabling
- Three Levels of Maintenance Services Available
- Access To Ascend B-STDx 9000 Plus Frame Relay Switches
- Access To Nortel DMS-500 Local & Long Distance Switches

- Fully Completed Collocation Service Application & Approval
- Credit Rating Check & Approval
- Completed Collocation Service Contract
- Minimum \$3,000 MoRC with Intermedia per Cabinet or Rack
- Cross Connection Charge for Pre-Approved, Non-Intermedia Facilities
- 1 Hour Scheduled Entry With Intermedia NOC
- 48 Hour Escorted Entry Notification

Intermedia collocation facilities are located in the following cities:

Atlanta, GA  
Charlotte, NC  
Cincinnati, OH  
Houston, TX  
Jacksonville, FL

Memphis, TN  
Miami, FL  
Nashville, TN  
New York, NY  
Orlando, FL

Pittsburgh, PA  
Raleigh, NC  
St. Louis, MO

Collocation available in new switch cities as they are rolled out

Call Intermedia today at: 1-800-250-2222

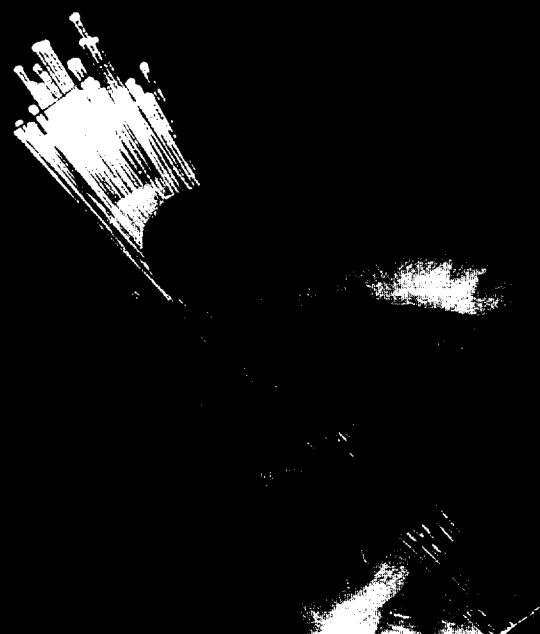
**COMMUNICATIONS**

New Day. New Way.  
[www.intermedia.com](http://www.intermedia.com)



connecting

a global network



c a r r i e r  
s e r v i c e s

Innovation in leadership. That's what we do. The qualities that propelled Excel Communications to the forefront of the industry and opened a world of communications can put your business on top as well. At Excel, we deliver the advanced technology, superior customer care, and competitive rates you need to connect your customers and build your business.



Today's fiercely competitive communications market demands that you offer your customer unparalleled network performance, an increased level of service, and a comprehensive product line. And Excel delivers.

We partner with resellers and carriers throughout every stage of growth. By combining customer-focused solutions with marketing support, customer service, and billing, we help you expand your business and remain competitive.

We respond.

We lead.

We deliver.



### Your One Source For Reliable Communications

Excel delivers more than powerful network access. We offer a single source for all your communications needs. When you team with Excel, you can take advantage of our Boundless Network Architecture and 24-hour support – along with complete billing and reporting services, comprehensive cash flow management, powerful marketing services, and competitive pricing. All under one roof.

As a result, you gain the resources, network, and service you demand – and the flexibility, agility, and personal attention you deserve.

### Setting A New Standard For Service

The standards for service at Excel center around anticipating your needs and helping you run your business more effectively. Our proprietary software solutions allow you online access to easily process orders and call records.

### For Reliability, Excel Is Your Best Connection

In today's fast-paced world, we reach beyond our customers' expectations – bringing together the best telecommunications services available in the industry. We've combined the power of innovative technology, an aggressive market approach and premier network performance together with unequalled customer service.

Team up with a leader that will support you, your customers, and the growth of your business today and into the future. When it comes to providing reliable carrier services, Excel is your best connection in a changing world.

#### Services

Domestic Termination

International Termination

Local Origination

Long Distance Origination

Mobile Transport

Private Line

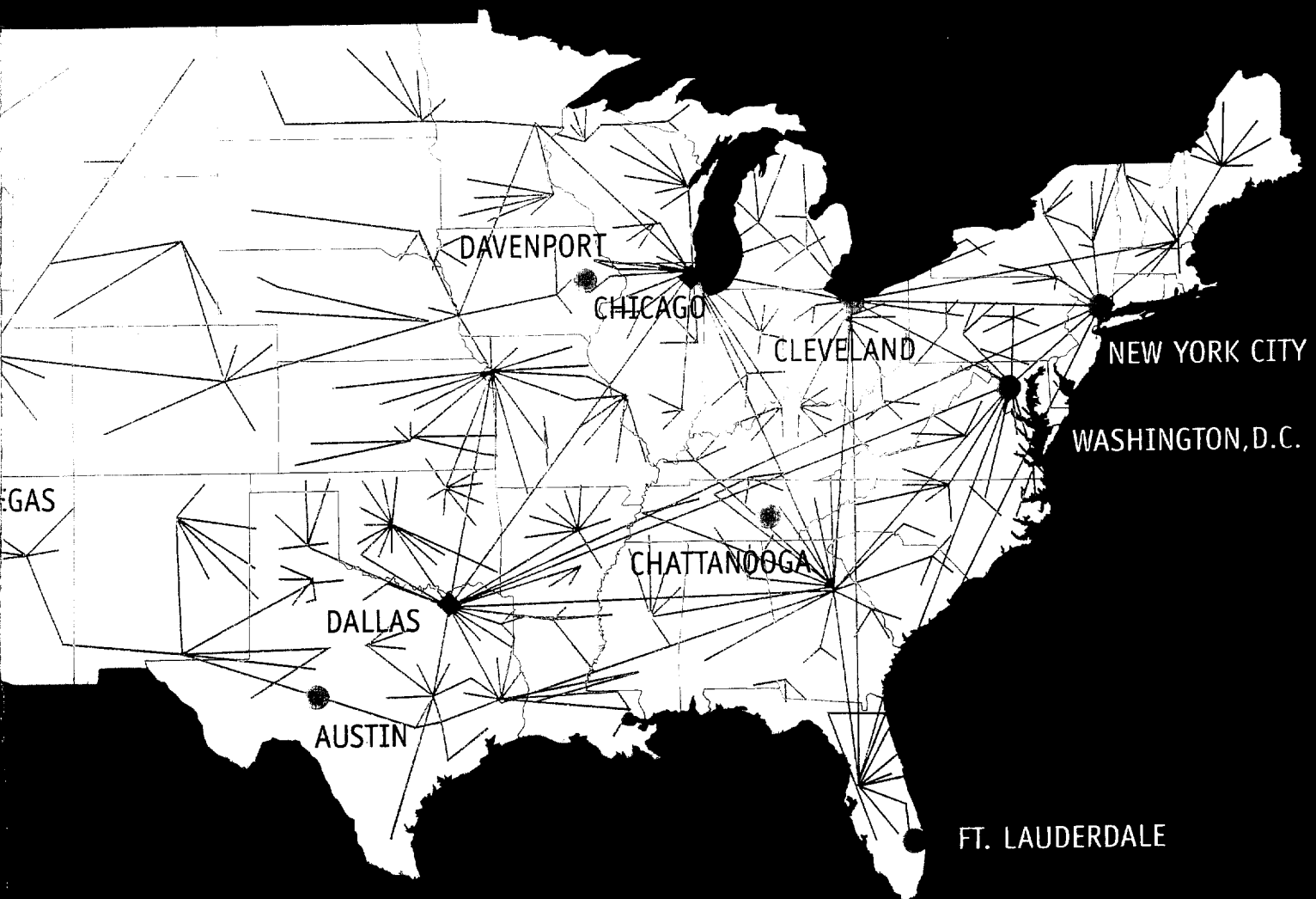
Trunk Relay

Internet Access

Wholesale Resale

Value Added Services

# Boundless Network Architecture



= Future Sites

= Switch Sites

In a world of constant change, reliable communications is imperative. That's where our Boundless Network Architecture comes in. Boundless means a network with no limits. It is built to accept all forms of voice, data, video, and wireless communications. And it expands and adapts as technology evolves and customer needs change.

The Excel network features state-of-the-art digital technology, including X 600 series switching sites

Creating Boundless Network Architecture requires an ongoing investment in switching technology, network infrastructure, and people. It maximizes network integrity and efficiency to ensure our customers stay connected every second of every day.

Don't miss our Network Architecture  
Video On Call.

Proactive support. Anticipating problems before they impact your customers. That defines our Network

Direct access to our 24-hour Network Control Center ensures our customers get immediate answers. And it's another way we back up our commitment to you and your success.



## Boundless Network Architecture

### Benefits:

- Unlimited capacity to connect any two points on the network
- Scalable architecture that grows with your business
- Proven performance and reliability
- Proven security and privacy
- Proven cost-effectiveness
- Proven flexibility and adaptability
- Proven scalability and growth



### A Network on the Edge

Excel is a nationwide, full-service communications company with one of the newest and most reliable networks in the industry. Our 100% digital fiber optic network is forging a new standard for the telecommunications industry.

Built for peak performance, our network delivers the backbone you need for top-quality telecommunications solutions. As your requirements

e respond.

e lead.

e deliver.



## Services

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-Free Origination

t Origination

Transport

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ng Services

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## Billing Service Through Telco Billing, Inc.

Telco Billing, Inc. (TBI), an Excel Communications, Inc. subsidiary, provides both Local Exchange Carrier (LEC) and direct customer billing services to certified resellers, carriers, cellular providers, and CLECs at competitive prices. TBI supports customer billing from either client provided CDRs or from Excel network CDRs.

### LEC Billing

TBI provides LEC billing through all of the RBOCs, GTE, Sprint / United, Alltel, SNET, and Cincinnati Bell.

### Direct Billing

TBI also provides resellers direct customer billing via monthly paper invoices using either a standard predefined format or a customer defined customized format. Along with the standard invoice, TBI offers eight optional management reports, flexible customer controlled pricing tables (rate folders), basic multi-location billing and month-end reporting for customer care applications.

### Rate Folder Options

The flexibility of the Telco billing system allows resellers to design products using many different pricing and rating options, including:

- Mileage sensitive
- Volume sensitive (direct invoice only)
- Optional monthly fee
- Flat rate
- Time of day rating options

### Multiple Service Billing

TBI, via the direct customer invoice, can include the following record types:

- Long distance toll
- Cellular access and toll
- Internet usage and monthly fees
- Local access and usage
- Paging usage and monthly fees

### Quality Assurance

Prior to submitting records to the LEC or creating a print image, TBI provides the carrier with Bill Audit Reports for pre-approval. This ensures accuracy and completeness of billing records.

### Bill View and Call View Capabilities

To provide carriers with the critical information required to service customer's billing inquiries, TBI provides LEC billed clients with exact copies of the billing information, as the customer will see it on their invoice. For LEC billed records TBI provides call view images, (call by call detail). For direct billed customers, bill view images are provided (invoice image).

### Advanced Funding for LEC Receivables

TBI provides advanced receivables funding for LEC accepted records.



## Switchless 1+ and Toll-Free Service

Switchless 1+ and Toll-Free Service is offered to certified carriers looking for high quality switched access network services at competitive rates. Utilizing Excel's nationwide Feature Group-D (FG-D) access circuits to originate traffic calls are transported nationwide and internationally via the Excel network. Carriers can expand into new areas without the cost of provisioning additional FG-D circuits, adding switch sites or deploying additional network. Excel Switchless Services are ideal for regional carriers.

### **Services**

Excel's Switchless Service provides switched access 1+ Piced origination from the continental U.S. and switched toll-free termination with domestic origination, including optional Alaska, Hawaii, Canada, Puerto Rico and U.S. Virgin Islands origination. In many RBOC areas, intra-LATA 1+ Presubscription is offered as an option, providing carriers with the ability to increase traffic and revenue.

Account Codes are available for 1+ users in 2 - 8 digit non-verified and 3 - 5 digit verified optional packages.

Enhanced Toll-Free Features are also available for toll-free users, including area code blocking, time-of-day and day-of-week routing, holiday and emergency routing, and percent allocation by location.

### **Network Availability**

The Excel network provides FG-D and toll-free access from virtually every RBOC, GTE, Sprint/United, Alltel, SNET and Cincinnati Bell tandem, along with many of the smaller independent LEC areas. With new areas being added daily as the Excel network expands, complete nationwide coverage is scheduled for year-end 1998.

### **Reseller Maintenance System (RMS) - Processing and Reporting**

Excel provides switchless carriers with password protected 24 hour access to our new on-line support system. The RMS provides simplified provisioning and audit controls to ensure all transactions are recorded and processed. This advanced system allows resellers to quickly transmit ANIs and toll-free numbers for processing. It also provides instant detailed status of transactions, including current status of each ANI (TC-SI code), along with file level reporting and LEC CARE information.

### **Call Detail Record Posting**

Via the Reseller Maintenance System, call records are provided on a next-day basis via File Transfer Protocol (FTP) accessible 24 hours a day. Carrier CDR files are posted to a carrier specific directory ensuring confidentiality.



## Switchless Dedicated 1+ and Toll-Free Service

Switchless Dedicated 1+ and Toll-Free Service continued

### **Pricing**

Excel's Switchless Dedicated Services utilize flat rate interstate and state specific intrastate pricing.

### **International Traffic and Pricing**

Excel's international network provides a minimum of eight different route choices to each country via multiple international gateways. This multiple route networking allows carriers to complete more calls and eliminate "all circuits busy" scenarios.

Calls to international locations are rated on a flat, per country basis. Excel eliminates the typical time-of-day international pricing common to the switchless market.

### **Call Minimums and Rounding**

All domestic Switchless Service calls carry an 18 second minimum with 6 second rounding.

### **Monthly Commitment Levels**

Switchless Service is offered with four commitment levels.

### **Billing**

All Excel carriers are billed monthly using a cycle from the 21st of the month to the 20th of each month. Monthly invoices include traffic (minutes, calls and originating/terminating ANI) by LATA and LEC or independent LEC.



## **Dedicated Domestic Termination Service**

Excel's Dedicated Domestic Termination Service offers certified carriers the ability to terminate domestic traffic via the Excel digital network at competitive rates. Designed for maximum efficiency, this service offers LATA specific termination rates to fulfill Carrier's needs on a regional or nationwide basis.

Dedicated Domestic Termination Service provides termination to all domestic LATAs, including Continental U.S., Alaska, Hawaii, Puerto Rico, U.S. Virgin Islands and Canada.

### **Monthly Commitment Levels**

Dedicated Domestic Termination Service is offered with four commitment levels.

### **RBOC and Independent Area Pricing**

Pricing is based on an RBOC termination rate structure. For traffic terminating to independent telephone company areas (excluding listed major independents) a surcharge of \$.0200 per minute is applied.

### **Off Peak Traffic**

Excel offers an aggressive off-peak policy allowing Carriers to terminate up to 20% of total traffic during the standard evening busy hour of 7PM to 9PM Sunday through Friday. Any traffic during this period over 20% of total traffic is assessed a \$.0125 per minute surcharge.

### **Access Locations**

Access to the Excel network is on a FOB Excel switch site basis. Excel meet points (switch centers) are located in New York, NY, Washington, DC, Chattanooga, TN, Ft. Lauderdale, FL, Austin TX, Cleveland, OH, Davenport, IA, Las Vegas, NV and Los Angeles, CA (May 1998).

### **Call Minimums and Rounding**

All domestic calls are rounding with 6 second minimums and 6 second rounding.

### **Billing**

All Excel Carrier customers are billed monthly using a cycle from the 21st to the 20th of each month. Monthly invoices include total traffic (minutes, calls and terminating ANI) by LATA and independent LEC.

Dedicated Domestic Termination Service rates subject to change with 30 days written notice.

## ATTACHMENT 3

Technology Control Services, Inc.  
Materials Distributed at  
TRA San Francisco Conference  
May, 1998



# ***VIRTUAL PRIVATE NETWORKS***

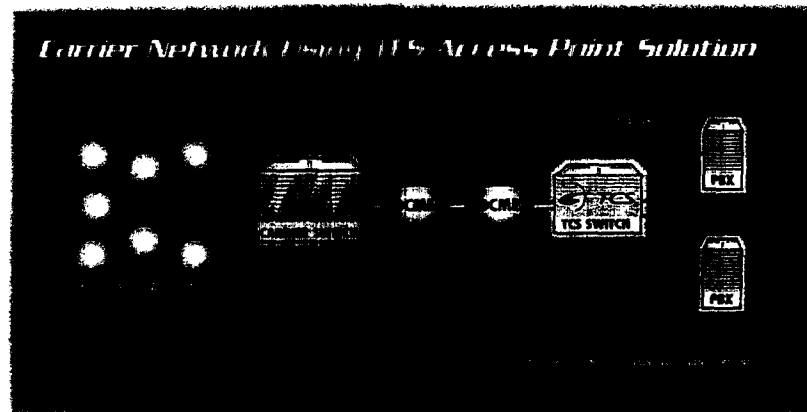
*Dramatically  
reduce the  
cost and  
expand the  
functionality  
of your private  
networks*



## ***TCS' Turnkey Solution to Extend Carriers' Networks***

TCS can be a powerful ally to any international carrier offering VPN services by leveraging its programmable switching platform and versatile network application environment into a packaged cost effective solution at the customer access level. This alliance frees subscribers to focus on core competencies within their network backbone, and leverage TCS' ability to expand the intelligent switching infrastructure and VPN feature set into additional emerging markets.

International carriers traditionally build their global networks out one tandem switch at a time into a region that can support a multi-million dollar investment. The addition of each tandem switch extends the carrier's network infrastructure or "backbone". It is a continual challenge for the carrier to economically and conveniently connect VPN customers to their backbone.



TCS can deliver its VPN solution at any access node through a fully managed service bureau or as a turnkey system with either solution seamlessly integrating into a corporate network. Due to the cost savings of both TCS offerings, it is now possible to expand into several locations within a budget allocated to deploying one traditional tandem switch.

## ***Maintain Consistency of Operations and Provisioning***

TCS has placed great emphasis on the reliability and serviceability of its VPN system. TCS fully understands and strives to exceed the rigid requirements of a carrier's engineering and operations teams. Manned global technical support is maintained as a primary or complimentary resource.